

CD40L/CD154/TRAP Protein, Human (Biotinylated, HEK293, Fc-Avi)

Cat. No.:	HY-P78934
Synonyms:	CD40 ligand; CD40-L; TRAP; CD154; sCD40L; TNFSF5
Species:	Human
Source:	HEK293
Accession:	P29965 (M113-L261)
Gene ID:	959
Molecular Weight:	50-55 kDa

PROPERTIES

Biological Activity	Immobilized Human CD40 His at 2 µg/mL (100 µL/well) can bind Biotinylated Human CD40 Ligand Avi-Fc with a linear range of 1-31 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.22 µm filtered solution of Tris with Glycine, Arginine and NaCl, pH 7.5.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

CD40L, also known as CD154 or TRAP protein, functions as a cytokine and serves as a ligand for CD40/TNFRSF5, orchestrating a cascade of immunological responses. It plays a pivotal role in T-cell activation, acting as a potent co-stimulator that enhances both T-cell proliferation and cytokine production, specifically IL4 and IL10. Upon cross-linking on T-cells, CD40L generates a costimulatory signal synergizing with TCR/CD3 ligation and CD28 costimulation. Additionally, CD40L induces the activation of NF-kappa-B, triggers the activation of kinases MAPK8 and PAK2 in T-cells, and facilitates tyrosine phosphorylation of CD28 isoform 3. Beyond T-cell modulation, CD40L mediates B-cell proliferation in the absence of co-stimulus and promotes IgE production in the presence of IL4, contributing to immunoglobulin class switching. Furthermore, it serves as a ligand for integrins, specifically ITGA5:ITGB1 and ITGAV:ITGB3, and collaborates with the CD40 receptor in the activation of CD40-CD40LG signaling, exerting cell-type-dependent effects such as B-cell activation, NF-kappa-B signaling, and anti-apoptotic signaling.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA